UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/016,958	12/07/2001	William Girard McCollom	10010635-1	7352

7590   04/09/2007

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EXAMINER
WALSH, JOHN B

ART UNIT	PAPER NUMBER
2151	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/09/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

PTOL-90A (Rev. 10/06)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12/21/06.*

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle,* 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4,6-8,10,11,13-17 and 19-27* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,6-8,10,11,13-17 and 19-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Claim Objections

1.   Claim 26 is objected to because of the following informalities: Claim 26, line 5 – delete

"s" after "in". Appropriate correction is required.

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3.   Claims 1-4, 6-8, 10, 11, 13-17 and 19-27 are rejected under 35 U.S.C. 102(e) as being

anticipated by U.S. Patent No. 6,751,663 to Farrell et al.

As concerns claim 1, a method of determining autonomous system volume data comprising:

collecting data flow statistics for at least one router (12; column 2, line 55); collecting routing

information base data for each of the at least one router (abstract; column 2, lines 52-54); and, thereby

yielding autonomous system volume data (column 3, lines 7-22); wherein the collected routing

information base data for the at least one router comprises at least one selected autonomous system path

(column 14, line 20; column 6, lines 13-16); wherein the step of correlating the routing information base

data and the data flow statistics comprises correlating a data flow statistic corresponding to a destination

address (column 7, line 58; destination) to each autonomous system included in an autonomous system

path corresponding to the destination address.

As concerns claim 2, the method of claim 1, further comprising, following the step of correlating: analyzing the autonomous system volume data (column 7, line 50; translates); and reporting results of the step of analyzing (column 7, line 51; records).

As concerns claim 3, the method of claim 1, wherein the step of collecting the data flow statistics for the at least one router comprises; collecting the data flow statistics during a pre-determined time interval (column 14, line 14), and aggregating the data flow statistics by destination address (column 24, line 31; addresses).

As concerns claim 4, the method of claim 1, wherein the step of collecting the data flow statistics for the at least one router comprises using a data flow collection program (column 2, line 41; process).

As concerns claim 6, the method of claim 1, wherein the step of collecting the routing information base data for the at least one router comprises taking a snapshot of border gateway protocol data (column 2, line 31).

As concerns claim 7, the method of claim 1, wherein the step of correlating comprises: identifying a destination address in the data flow statistics (263); identifying a prefix (262) corresponding to the destination address, identifying an autonomous system path (column 14, line 20) corresponding to the prefix; correlating a data flow statistic corresponding to the destination address to each autonomous system included in the autonomous system path (column 7, line 58; destination).

As concerns claim 8, the method of claim 1, wherein the step of correlating comprises; identifying a destination address (column 7, line 58; destination) in the data flow statistics; and correlating a data flow statistic corresponding to the destination address to each autonomous system included in an autonomous system path corresponding to the destination address (column 14, line 20).

As concerns claim 10, the method of claim 7, wherein the step of correlating comprises repeating the steps of claim 7 for each destination address of the data flow statistics of each of the at least one router (column 34, lines 58-60).

As concerns claim 11, the method of claim 8, wherein the step of correlating comprises repeating the steps of claim 8 for each destination address of the data flow statistics of each of the at least one router (column 6, line 41-column 7, line 10).

As concerns claim 13, the method of claim 1, further comprising: computing at least one synthetic autonomous system path (column 14, line 20); and reporting autonomous system volume data of the at least one synthetic autonomous system path (column 14, line 20; column 6, line 62).

As concerns claim 14, a system for determining autonomous system volume data comprising: a data flow collection node (column 6, line 13; 18) adapted to collect data flow statistics from at least one router a routing information base collection node adapted to periodically collect routing information base data from the at least one router; and a correlation node (13) adapted to correlate the routing information base data and the data flow statistics and thereby yield autonomous system volume data; wherein the correlation node is adapted to correlate a data flow statistic (column 6, lines 15-16; statistics on information) corresponding to a destination address to each autonomous system included in an autonomous system path corresponding to the destination address.

As concerns claim 15, the system of claim 14, further comprising a reporting node adapted to analyze and report on the autonomous system volume data (22).

As concerns claim 16, the system of claim 14, wherein the correlation node is adapted to identify a destination address in the data flow statistics (263), identify a prefix (262) corresponding to the destination address, identify an autonomous system path corresponding to the prefix, correlate (308) a

data flow statistic corresponding to the destination address to each autonomous system included in the autonomous system path.

As concerns claim 17, the system of claim 14, wherein the correlation node is adapted to identify a destination address (column 24, line 31) in the data flow statistics, and correlate a data flow statistic corresponding to the destination address to each autonomous system included in an autonomous system path corresponding to the destination address (column 6, lines 41-49).

As concerns claim 19, the system of claim 14, wherein at least two of the data flow collection node, the routing information base collection node, and the correlation node are the same node (figure 1).

As concerns claim 20, the system of claim 14, wherein the data flow collection node, the routing information base collection node, and the correlation node are each a separate node (figure 1).

As concerns claim 21, the system of claim 14, further comprising a reporting node (22) adapted to report autonomous system volume data on at least one synthetic autonomous system path.

As concerns claim 22, a method of generating autonomous system volume data comprising: detecting at least one first data flow (column 5, line 3) having a first volume and directed toward a first destination address identifying a first selected autonomous system path in a routing information base over which said first data flow is routed; and for each autonomous system in the first selected autonomous system path, incrementing a counter (column 6, line 20, counters; replacing a default value with value detected) by an amount indicating the first volume.

As concerns claim 23, the method of claim 22, further comprising: detecting at least one second data flow (column 5, line 3; multiple data flows may be detected by the flow data collector) having a second volume and directed toward a second destination address using a second selected autonomous

system path in the routing information base, for each autonomous system in the second selected autonomous system path, incrementing a counter (column 6, line 20 counters; replacing a default value with value detected) by an amount indicating the second volume; and wherein at least one autonomous system in the routing information base is updated before the detecting of the at least one second data flow (information for first data flow detected then second data flow will be detected).

As concerns claim 24, the method of claim 22, further comprising: providing counter data (counters; replacing a default value with value detected) resulting from the incrementing of the counter during a specified time period; analyzing the counter data (column 7, line 50; translates); and reporting (column 7, line 50; 22) results of the step of analyzing.

As concerns claim 25, a method of generating autonomous system volume data comprising: detecting at least one first data flow (column 5, line 3) having a first volume and directed toward first destination address; identifying a first selected autonomous system path in a routing information base over which said first data flow is routed (column 14, line 20); and for each autonomous system in a first synthetic autonomous system path constructed using the at least one first selected autonomous system path, incrementing a counter (column 6, line 20 counters; replacing a default value with value detected; see also column 17, lines 29-35 and column 21, lines 22-27) by an amount indicating the first volume.

As concerns claim 26, the method of claim 25, further comprising: detecting at least one second data flow (column 5, line 3; multiple data flows may be detected by the flow data collector) having a second volume and directed toward a second destination address using a second selected autonomous system path in the routing information base; for each autonomous system in a second synthetic autonomous system path constructed using the selected autonomous system path, incrementing a counter (counters; replacing a default value with value detected) by an amount indicating the second volume,

and wherein at least one autonomous system in the routing information base is updated before the

detecting of the at least one second data flow (information for first data flow detected then second data

flow will be detected).

As concerns claim 27, the method of claim 25, further comprising: providing counter data (18)

resulting from the incrementing of the counter during a specified time period; analyzing the counter data

(17); and reporting results (22) of the step of analyzing.

The claims recite the term "adapted to". It has been held that the recitation that an

element is "adapted to" perform a function is not a positive limitation but only requires the

ability to so perform. It does not constitute a limitation in any patentable sense. In re Hutchison,

69 USPQ 138.

Response to Arguments

4.   Applicant's arguments filed December 21, 2006 have been fully considered but they are

not persuasive.

The applicant argues Farrell et al. do not disclose "identifying an autonomous system

path over which a data flow is routed, and then incrementing a counter for each autonomous

system in the path." Farrell et al. disclose identifying autonomous system paths (see column 19,

line 8; column 23, lines 44-50; column 6, lines 12-22) and incrementing counters for each path

(see column 6, lines 12-22; column 17, lines 29-35 and column 21, lines 22-27).

The applicant argues Farrell et al. do not disclose a "synthetic" autonomous system path.

The claims are given the broadest reasonable interpretation and the applicant's claimed

"synthetic" autonomous system path appears equivalent to the autonomous system path of the

earlier claims. The claims do not define how the "synthetic" type is distinct from the earlier

claimed path. Furthermore, Farrell et al. do disclose identifying autonomous system paths (see rejection above and column 19, line 8 and column 23, lines 44-50).

Conclusion

5.   Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).
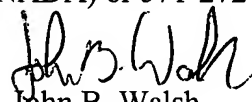
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to John B. Walsh whose telephone number is 571-272-7063. The examiner can normally be reached on Monday-Thursday from 7:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zarni Maung can be reached on 571-272-3939. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

John B. Walsh
Primary Examiner
Art Unit 2151